

UE Cell Biology 2 - BIO331 -



ECTS
6 crédits



Composante
Département
de la licence
sciences et
technologies
(DLST)



Période de
l'année
Automne (sept.
à dec./janv.)

Diplômes intégrant cet élément

- Licence Chimie

- > **Langue(s) d'enseignement:** Anglais
- > **Ouvert aux étudiants en échange:** Non
- > **Code d'export Apogée:** YAX3BI91

Présentation

Description

This course aims at the acquisition of a good knowledge of the functioning of eukaryotic and prokaryotic cells, which deals with all the major cellular functions (replication, transcription, translation, cytoskeleton, cell cycle, cell-environment interaction) and the experimental methods which allow their analysis.

The approach to acquire this knowledge in the Tutorial session is carried out by interactive pedagogical methods (preparatory work, work in small groups, oral presentation) in the form of actions that the students must carry out throughout the semester: oral retransmission of knowledge, resolution of problem sets that directly apply the concepts developed in lectures, elaboration of MCQs, analysis of scientific figures, elaboration of a pedagogical creativity project.

In practical work, the student will have a first introduction to the experimental approaches of differential centrifugation, cell culture and luminescent immunolabelling.

Heures d'enseignement

CM	CM	30h
TD	TD	15h
TP	TP	14h

Pré-requis recommandés

Knowledge of the biomolecular constituents of the cell (BIO131), basics of cell biology (BIO231)

Période : Semestre 3

Compétences visées

Scientific skills	Technical skills
- Exploit learning mechanisms to become an actor. - Oral expression and presentation skills. - Convey a message efficiently. - Work methodically and follow a scientific method. - Understand the meaning of a published scientific figure and know how to extract the biological question behind the experiment. - Identify biological tools and techniques and exploit data for analysis. - Organize a commentary along an explanatory path. - Use appropriate and relevant scientific analysis vocabulary. - Provide clear, legible and carefully spelled scientific material. - Know how to format, analyze and interpret a set of written results. - Ability to work as part of a team. - Take responsibility within a group.	- Know how to take and condition a sample and package samples. - Prepare for assays (measurements, analyses) on a sample (identification, preparation of necessary equipment). - Perform basic tests (measurements, analyses) on a sample (planning, execution). - Pipet small volumes using micropipettes. - Perform dilutions in appropriate solutions. - Collect and present test results from raw data, and manage traceability of results. - Comply with health and safety regulations. - Restore workstation to its original state.

- **Reinvest** general knowledge.
- **Mobilize** knowledge.
- **Explain** calculations clearly and coherently.
- **Manage** work time.
- **Use** digital tools.

Bibliographie

The Cell, G. M. Cooper (De Boeck)

Biology, N. A. Campbell (Benjamin-Cummings Publishing Company)

Molecular Cell Biology, J. E. Darnell et al. (Scientific Amer. Inc.)

Infos pratiques

Contacts

Responsable pédagogique

Adrien ANTKOWIAK

✉ adrien.antkowiak@univ-grenoble-alpes.fr

Lieu(x) ville

➤ Grenoble

Campus

➤ Grenoble - Domaine universitaire